

COUNTY BOROUGH OF SOUTH SHIELDS.



Report on the
HEALTH OF THE BOROUGH
DURING 1902,

BY

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South Shields :

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INTRODUCTORY.



*To the Chairman and Members of the
Health Committee.*



MR. CHAIRMAN AND GENTLEMEN,

I have the honour to submit to you the Annual
Report of the Health of the Borough for the year 1902.

I am, Gentlemen,

Yours obediently,

JOHN J. BOYD, M.B., C.M., D.P.H.,

Medical Officer of Health

Health Office,

South Shields,

March 17th, 1903.

REPORT, 1902.

VITAL STATISTICS.

Area of Borough.—2,200 acres.

Population.—Estimated to June 30th, 1902, 103,330 ; density of population, 46·9 persons per acre.

The above estimate is arrived at by presuming that the rate of increase is the same as during the decade preceding the Census. Judging from the number of births, and from the number of houses erected, I consider that the estimate is correct within a hundred or so. The estimated populations of the Wards of the Borough are as follows :—

Shields	9,162	Westoe	13,370
St. Hilda	5,351	Laygate	9,842
Holborn.....	6,783	Rekendyke	11,728
Beacon	10,349	Deans	13,110
Bents	11,070	Tyne Dock	12,565

CENSUS, 1901.—More detailed information was, during the year obtained from the Registrar-General, part of which is shown in the tables below. For purposes of enumeration the Borough was divided into 80 districts. We have obtained as regards these areas (1) the population, (2) the proportion living at various different ages, (3) the number of dwellings of 1, 2, 3 and 4 rooms, and the number of persons occupying the same. This information is too voluminous

to print, but will be of the greatest service in enabling an accurate comparison to be made between various districts of the Borough as regards (1) death-rates from various diseases, and (2) attack-rates from various infectious diseases.

AGE POPULATIONS IN THE WARDS, ACCORDING TO THE CENSUS, 1901.

Ward.	Popula- tion.	-1	%	-5	%	5-15	%	60 and over.	%
Beacon	10,271	295	2·8	1,351	13·5	2,332	22·7	577	5·6
Bents	10,757	259	2·4	1,191	11·0	2,327	21·6	675	6·2
Deans	12,282	452	3·6	1,913	15·5	2,981	24·2	442	3·6
Holborn ...	6,732	195	2·8	863	12·8	1,540	22·8	427	6·3
Laygate ...	9,791	330	3·3	1,510	15·3	2,415	24·6	458	4·6
Rekendyke	11,659	365	3·1	1,714	14·7	2,812	24·1	509	4·3
St. Hilda ..	5,246	162	3·1	694	13·2	1,222	23·3	362	6·9
Shields ...	9,111	269	2·9	1,208	13·6	2,209	24·2	492	5·4
Tyne Dock	8,771	229	2·6	1,046	11·9	1,865	21·2	399	4·5
Westoe	12,643	410	3·2	1,811	14·3	2,958	23·4	548	4·3
Totals...	97,263	2966	3·0	13,301	13·6	22,661	23·3	4889	5·0

TENEMENTS IN THE WARDS, SHOWING THE NUMBER OF ROOMS TO EACH TENEMENT.

Ward.	Rooms per Tenement.					Totals.
	1	2	3	4	5 and over.	
Beacon	42	748	483	426	591	2290
Bents	40	407	665	558	771	2441
Deans	37	906	647	656	419	2665
Holborn	386	665	208	101	123	1483
Laygate	195	1182	428	239	111	2155
Rekendyke	62	1073	697	396	276	2504
St. Hilda	172	596	166	75	190	1199
Shields	540	840	365	208	121	2074
Tyne Dock	69	480	500	417	272	1738
Westoe	15	505	767	711	705	2703
Totals	1558	7402	4926	3787	3579	21252

OCCUPANTS IN 1 AND 2-ROOMED TENEMENTS.

Ward.	1 Roomed Tenements with more than 4 Occupants.	2 Roomed Tenements with more than 8 Occupants.
Beacon	3	12
Bents	2	8
Deans	11	17
Holborn	71	30
Laygate	23	40
Rekendyke	7	30
St. Hilda	19	27
Shields	76	32
Tyne Dock	9	10
Westoe.....	1	13
Whole Borough...	222	219

Births registered during the year numbered 3,759, being 152 more than 1901. This gives a BIRTH-RATE OF 36·4 PER 1,000 of the population.

	Males.	Females.	Totals.
Legitimate	1,824	1,826	3,650
Illegitimate	47	62	109
Totals	1,871	1,888	3,759

The percentage of illegitimate births was 2·9 against 3·04 for 1901. The proportion of male and female births was 991 males to 1,000 females.

Deaths.—2,027 deaths were recorded as occurring in the Borough, 1,063 being males and 964 females. This number includes the deaths of 139 persons in Harton Workhouse; 18 in Sedgfield Asylum; and 5 in “other localities,” who all belonged to the Borough, but at the time of their death were in these institutions on account of sickness or infirmity. It also includes 16 who died in but did not belong to the town. Excluding these 16, the number of deaths is 2,011, which is equal to a DEATH-RATE OF 19·4 PER 1,000 of the population.

The following tables show how South Shields compares with the country generally.

TABLE COMPARING THE VITAL STATISTICS OF SOUTH SHIELDS WITH THOSE OF OTHER LARGE TOWNS DURING 1902.

NAME OF CITY OR TOWN.	Population.	Birth-rate.	Death-rate.	Zymotic Death- rate.	Infantile Mortality-rate.	Average Death- rate, 1892-1901.	Scarlet Fever Attack-rate.	Scarlet Fever Death-rate.
Birkenhead ..	112,102	32·5	17·7	2·4	151	18·8	3·5	·10
Birmingham ...	528,181	31·9	18·0	2·6	157	20·2	9·4	·55
Blackburn ...	130,329	25·7	17·2	1·9	157	20·6	3·8	·23
Bolton ...	171,082	27·9	17·2	2·1	132	20·8	...	...
Bradford ...	281,770	22·9	15·7	1·4	138	18·2	3·2	·16
Brighton ...	124,539	24·3	15·8	1·3	125	17·6	1·2	·024
Bristol ..	334,632	27·5	17·3	2·7	181	17·5	7·98	·19
Burnley ...	99,000	29·3	19·1	3·5	176	20·0	9·6	·07
Cardiff ...	168,909	31·2	16·7	2·7	145	17·9	8·4	·20
Derby ...	116,869	28·5	14·0	1·25	122	16·8	2·9	·07
East Ham ...	104,023	36·5	10·7	1·8	117	13·0	5·6	·086
Gateshead ...	113,024	36·8	17·9	2·3	137	19·1	7·9	·30
Halifax ...	105,950	20·3	15·1	0·85	152	17·6	4·2	·15
Huddersfield ...	95,010	24·4	17·7	1·6	138	17·5	...	·11
Kingston-upon-Hull	245,448	31·7	16·8	2·2	183	18·6	3·6	·06
Leeds ...	437,036	29·8	17·6	2·8	160	19·7	4·5	·13
Liverpool ...	710,337	34·2	21·6	3·4	162	23·4	8·3	·44
Middlesbrough ...	93,354	36·1	20·5	2·4	182	20·8	5·0	·44
Northampton ..	88,206	25·7	14·7	1·7	132	15·7	1·8	·02
Oldham ...	138,091	26·1	19·1	2·0	148	21·2	5·1	·27
Plymouth ...	110,066	26·8	16·9	1·7	156	19·2	1·8	·09
Preston ...	113,766	28·8	17·5	2·7	188	21·3	5·4	·17
Rhondda ...	117,007	42·2	19·2	3·3	178	20·5	7·1	·23
Salford ...	224,007	33·7	19·2	2·6	157	23·6	...	...
Southampton ...	107,833	28·8	15·5	1·4	124	17·5	2·4	·04
Stockport ...	94,422	27·6	19·4	1·9	183	22·1	5·4	·24
Sunderland ..	147,983	35·7	19·3	1·9	153	21·1	5·5	·17
Tottenham...	107,003	31·7	13·4	2·1	124	15·7	4·5	·11
Walthamstow ...	101,318	33·8	11·4	1·3	115	14·1	5·4	·06
West Ham ...	275,408	34·0	17·3	3·1	144	19·0	4·9	·15
Willesden ...	122,211	31·4	15·0	2·3	130	...	3·8	·09
Wolverhampton ...	95,736	31·6	16·2	1·7	137	20·6	5·7	·15
South Shields ...	103,330	36·4	19·4	2·6	149	20·0	8·0	·37

Death-rates and birth-rates—per 1,000—throughout England and Wales during 1902 :—

		Birth-rate.	Death-rate.	Zymotic Rate.	Infantile Mortality Rate.
England and Wales	...	28·6	16·3	1·64	133
76 Great Towns* ...	...	30·0	17·4	2·12	145
103 Smaller Towns	...	27·3	15·3	1·53	135
South Shields...	...	36·4	19·4	2·62	149

* It must be observed that the comparison is now with 76 towns instead of 33, all towns with a population of over 50,000 being now included in the "Great Towns." Hence our relative position is better than it was last year.

It will be noted that the death-rate for the year is appreciably lower than that of 1901, and is also lower than the average of the preceding decade. This improvement is accounted for by the lower incidence of zymotic disease, and the diminished infantile mortality. The death-rate, however, still remains considerably higher than the average rate for the great towns. The excess is almost identical with that of last year, 2·1 per 1,000 as against 2 per 1,000. This means that in our population of 100,000, 200 more persons have died during the year than in an average urban population of the same size.

This is now the fifth year in which a relatively high death-rate has been registered. Taking the 76 towns individually we find that South Shields' death-rate is exceeded by only 9 towns; three towns have the same death-rate as South Shields, and in 63 the death-rate is lower.

Only ·5 per 1,000 of the excess is this year due to zymotic disease. Infantile mortality in South Shields is comparatively low; 29 towns show a higher rate for the past year.

There must, therefore, be some other cause of death in the Borough which accounts for the somewhat high total rate.

Infantile Mortality.—The deaths of 563 children under one year of age were recorded during the year, yielding an INFANTILE MORTALITY RATE OF 149 PER 1,000 BIRTHS registered. This rate is considerably lower than that of any year since 1894, when it was 138. The low figure is chiefly accounted for by the absence of infantile diarrhoea. Infantile mortality rate was low all over the country for the year, as shown by the preceding table.

Comparing the averages for the decade, 1892-1901, I find that the rate for South Shields is 165·5 per 1,000, whilst that for the 33 towns is 170. The favourable position which this Borough holds in this respect is, I think, largely due to the very small proportion of mothers engaged in work outside their own homes. Out of 19,475 married women and widows only 1,545 were engaged in occupations, being about 8 per cent.

INFECTIOUS DISEASES.

TABLE showing the number of notifications of the notifiable diseases reported, and the deaths therefrom, during 1902:—

Diseases.	Cases.	Deaths.*
Chickenpox	421	...
Smallpox	71	3
Scarlet Fever	834	39
Diphtheria	23	4
Membranous Croup ..	4	2
Typhus Fever ... ..	...	...
Enteric or Typhoid Fever ...	66	3
Continued Fever ... ..	...	...
Relapsing Fever ... ..	...	...
Puerperal Fever	7	3
Cholera ... ..	...	...
Erysipelas	98	3
Totals	1524	57
1901	1499	99

* Excluding deaths of persons belonging to South Shields who died in Harton Workhouse and other Institutions outside of the Borough, viz. :—3 Enteric Fever, 1 Smallpox, 1 Puerperal Fever, and 1 Erysipelas,

INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

The following Table shows the number of cases of Infectious Diseases notified to the Medical Officer of Health, and the months in which they occurred:—

Month.	Chickenpox.	Smallpox.	Cholera.	Diphtheria.	Membranous Group.	Erysipelas.	Scarlet Fever.	Typhus Fever.	Enteric Fever.	Continued Fever.	Puerperal Fever.	Relapsing Fever.	Totals.
January ...	...	3	...	1	...	10	108	...	10	...	...	...	132
February ...	...	5	...	...	1	7	101	...	6	...	...	...	120
March ...	...	5	...	1	...	9	98	...	2	...	...	...	115
April ...	24	27	...	2	1	10	90	...	3	...	...	...	157
May ...	36	16	...	1	...	3	73	...	4	...	...	...	133
June ...	54	12	...	3	...	7	66	...	6	...	1	...	149
July ...	44	1	...	1	1	7	50	...	10	...	1	...	115
August ...	41	2	...	1	...	7	37	...	4	...	1	...	93
September ...	29	...	...	...	...	2	62	...	7	...	...	...	100
October ...	45	...	...	6	...	11	63	...	5	...	2	...	132
November ...	86	...	...	6	1	18	46	...	7	...	1	...	165
December ...	62	...	...	1	...	7	40	...	2	...	1	...	113
Totals ..	421	71	...	23	4	93	834	...	66	...	7	...	1524
1901 ...	...	...	...	30	5	79	1263	...	115	2	5	...	1499

Zymotic Diseases.—The seven principal Zymotic Diseases accounted for 271 of the deaths as follows:—

Smallpox.	Measles.	Scarlatina.	Diphtheria.	Whooping Cough.	"Fever."	Diarrhoea.
4	95	39	*6	104	6	17

* Including 2 from Membranous Group.

One of the deaths from Smallpox, however, occurred in a Shields man at the Floating Hospital, Cowper Bewley, whence he had been removed from his ship, having contracted the disease *en voyage*. Beyond this the case is not taken into consideration in this report.

The death-rate for the seven principal Zymotic Diseases was 2·63, as compared with 3·36 for the previous year.

ZYMOTIC RATES—PER 1,000 OF THE POPULATION.

(All rates since 1891 have been corrected on Census Population, 1901.)

YEAR.	Smallpox.	Scarlet Fever.	"Fever."	Diphtheria and Mem. Croup.	Measles.	Whooping Cough.	Diarrhoea.	Total Zymotic rate.
Mean 1871-80 ...	·85	1·44	·79	·12	·42	·78	1·59	6·02
Mean 1881-90 ...	·01	·45	·19	·10	·34	·44	·78	2·34
1891	·00	·11	·20	·29	·90	·60	·73	2·85
1892	·00	·12	·21	·09	·29	·33	·55	1·66
1893	·036	·38	·37	·02	·38	·36	1·56	3·18
1894	·00	·39	·20	·04	·19	·17	·42	1·36
1895	·00	·18	·34	·08	·29	·90	1·42	3·36
1896	·00	·18	·28	·04	·92	·42	·58	2·49
1897	·00	·15	·16	·06	·28	·25	·88	1·83
1898	·00	·25	·39	·00	·56	·77	1·11	3·09
1899	·00	·21	·47	·02	·04	·12	1·41	2·33
1900	·00	·21	·19	·09	·55	·67	·55	2·33
Mean 1891-1900...	·003	·21	·28	·07	·44	·45	·92	2·44
Mean 1871-1900...	·291	·70	·42	·10	·40	·56	1·10	3·60
1901	·00	·60	·22	·14	·68	·10	1·60	3·36
1902	·039	·38	·06	·06	·92	1·01	·16	2·62

The outstanding features of the zymotic returns for the year are the almost complete absence of Infantile Diarrhoea; the occurrence of extensive epidemics of Whooping Cough and Measles, and the re-appearance of Smallpox in the death returns after an absence of 9 years.

Smallpox.—71 cases of this disease were notified during the past year, and of these 3 died. In two special reports to your Committee I have given detailed particulars with regard to these. On ten different occasions was the disease introduced into the Borough ; 5 times from infected ships, chiefly trading with London, and 5 times from North Shields, where the disease was somewhat prevalent.

Of the 71 cases, 36 were secondary to known cases existing in the Borough. The origin of the remaining cases is shown in the following table :—

SMALLPOX IN 1902.

Date of Invasion.	Source of Infection.	No. of Primary Cases.	Secondary Cases.
January 10	Supposed Sailor, undiscovered	3	5
March 22	Unrecognised case treated as Chickenpox, and infected in North Shields	3	
„ 28	s.s. "Newark," (London Trader)	1	13
„ 30	North Shields	1	6
April 7	s.s. "Tom John Taylor," (London Trader)... ..	1	3
„ 9	North Shields	1	..
„ 13	Wife of Mate of "Nellie Wise," who had suffered from unrecognised attack	1	1
„ 21	?	1	..
„ 21	Seaman s.s. "Tom John Taylor," who had suffered from unsuspected attack... ..	1	1
„ 29	Father, who had had unrecognised attack, worked at North Shields	1	1
May 7	North Shields	1	..
„ 8	?	2	3
„ 9	Brother suffered from unrecognised attack treated as Chickenpox	2	..
„ 12	?	1	..
„ 12	? Ship	1	..
„ 19	?	1	..
„ 27	? Barber's Shop	1	2
June 1-26	?	10	1
August 8	? Excursionist	2	..
		35	36

In the later cases it was not found possible to establish the source of infection, but no doubt they arose from the non-detection of mild cases, which appear to be of such frequent occurrence.

It will be noted that 19 of the 36 secondary cases belonged to two foci of infection. In both instances the first cases were mistaken for Chickenpox.

All the cases were seen by me immediately on notification, and afterwards removed without delay to Whiteleas Hospital.

Of the secondary cases 6 were already isolated as contacts at the time they developed the disease, while 23 were under observation at their own homes.

121 persons were admitted to the Contact House at Whiteleas for observation and disinfection. A considerable proportion of these were re-vaccinated. In most cases the whole of an infected house was subjected to fumigation, the inmates being removed to Whiteleas.

Over 3,000 visits were made to contacts by the Inspectors, besides those which I personally made. A very large number of persons were re-vaccinated by the Public Vaccinators—how many I am unable to ascertain—in addition to those done by private practitioners, and 4,025 primary vaccinations were performed. On the 10th April Chicken-pox was declared a notifiable disease.

By dint of all these measures the disease was prevented from obtaining any hold in the Borough, and for the last four months of the year we have been entirely free from it. It will be noted that even the small number of cases which occurred entailed a very great amount of work, and considerably interfered with the ordinary routine work of the department.

The following particulars of the state of victims of the disease as regards **Vaccination** are interesting.

VACCINATION.	AGES.					TOTALS.
	1-5.	5-10.	10-20.	20-40.	Over 40.	
Unvaccinated ...	8	7	8	4	...	27
Poor Marks ...	...	1	1	1	...	3
Fair „ ...	...	...	2	6	3	11
Good „ ...	...	...	7	21	2	30
Totals ...	8	8	18	32	5	71

No case occurred in a vaccinated child under 8 years of age ; nor in anyone who had been re-vaccinated within ten years previous to exposure to infection. Of the three persons who died, two were unvaccinated, and the third, aged 44, showed two very poor marks of infantile vaccination. In addition to the three fatal cases, there were eleven severe attacks ; seven being in unvaccinated persons, two in persons between twenty and thirty with indifferent or poor marks, and two in persons over fifty with good marks.

Of the 21 attacks occurring in persons between 20 and 40 years of age, and having good marks, it may be said that they were all very mild, some only with difficulty diagnosed.

Scarlet Fever.—During the year there were 834 cases of this disease, being almost two-thirds as many as last year. 536, however, occurred in the first half of the year, and really formed part of the epidemic of 1901. During the last six months of the year there were only 295 cases, which number is below the average for the time of year.

The accompanying table shows the distribution of the disease in the different wards of the Borough, and at the different quarters of the year.

SCARLET FEVER during 1902, distributed according to Wards and Quarters.

	Shields.	St. Hilda.	Holborn.	Beacon.	Bents.	Westoe.	Laygate.	Rekendyke.	Deans.	Tyne Dock.	Totals.
1st Quarter	14	1	9	27	40	58	20	45	69	21	307
2nd "	13	7	13	23	36	42	17	25	31	22	229
3rd "	1	13	9	3	17	22	17	20	23	24	149
4th "	11	5	2	18	24	23	13	13	28	12	149
Totals	39	26	33	71	117	145	67	106	151	79	834
Estimated Population to June 30th	9,162	5,351	6,783	10,349	11,070	13,370	9,842	11,728	13,110	12,565	103,330
Attack-rate per 1,000 Population	4.2	4.8	4.8	6.8	10.6	10.8	6.8	9.0	11.5	6.3	8.0
Mortality per cent. of Cases	5.1	0.0	9.0	2.8	3.4	5.5	13.3	1.9	4.6	2.5	4.7
Death-rate per 1,000 Population	.22	.00	.44	.19	.36	.59	.91	.17	.53	.16	.37
% of Cases removed to Hospital	72	92	66	42	44	44	58	43	41	53	48.9
Average Attack-rate for 1901 and 1902	6.8	6.9	6.6	11.1	10.0	14.9	10.3	12.1	12.3	7.4	10.2
Per cent. of Population under 15	37	36	36	35	32	37	40	38	39	33	34
Corrected Comparative Rates...	18.1	19.1	18.3	31.7	31.2	40.2	25.7	31.8	31.5	22.4	...

Attack, Death, and Mortality-rates from Scarlet Fever since 1892, with average at foot for comparison :—

Year.	Population.	Attack-rate per 1,000 Population.	Death-rate per 1,000 Population.	Mortality Rate, % of Cases.
1892	80,530	4·8	·12	2·5
1893	82,284	7·4	·38	5·2
1894	84,077	8·4	·39	4·6
1895	85,910	4·4	·18	4·1
1896	87,785	5·4	·18	3·3
1897	89,699	7·1	·15	2·2
1898	91,656	6·9	·25	3·6
1899	93,657	7·1	·21	3·0
1900	95,703	5·3	·21	4·1
1901	97,800	12·5	·60	4·7
1902	103,330	8·0	·37	4·7
Av. 1892-01	...	6·1	·26	3·7

At the end of 1901 the disease prevailed chiefly in the Deans, Westoe, and Bents Wards, and in these Wards the largest number of cases were recorded in the past year.

For a comparison of the Wards, the most valuable figures are those giving the average attack-rates for the two years, 1901 and 1902. Here Westoe stands highest with an attack-rate of 14·9, whilst Shields, St. Hilda, and Holborn show a rate less than half as great. What will strike anyone well acquainted with the town is that the Wards which contain the “slums” come out best in this comparison. This is even more apparent when smaller areas are taken. As more than $\frac{1}{12}$ ths of the attacks occur in children under fifteen years, it is evident that the proportion of children in the population of any Ward must have an important bearing on the prevalence of the disease. I have, therefore, shown in the table the percentage of children under fifteen to the general population as it existed at the time of the census. From this I show the attack-rate that would have prevailed in each Ward had the population consisted

wholly of children under fifteen. Not until this has been done is it possible to attribute the varying prevalence in the Wards to other causes.

After this correction the Wards still show much the same differences in attack-rate. Laygate now, however, occupies a better position than the Bents, the rate in the latter Ward now nearly equalling that of the Deans, Rekendyke, and Beacon. To no single reason, probably, is this very striking difference between the attack-rates to be attributed, but it is very interesting to note that almost without exception the greater the proportion of cases sent to hospital, the lower is the attack-rate in the Ward. The fact that the localities with fewest cases are the most densely populated and the poorest, can hardly be considered a reason for their comparative immunity, nor do they show a similarly favourable position as regards other zymotic diseases.

Of the total of 834 cases, 234 were secondary or return cases, being more than $\frac{1}{4}$ of the total. "Secondary" cases are cases in the same house as a previous one, and infected from it. "Return" cases are those which occur in a house to which a patient has been discharged from the hospital. Of the secondary cases 83 occurred before notification of the primary case, and were notified along with it; 55 occurred after removal of the primary case to hospital, 38 of these within seven days and 17 later; 75 occurred when the primary case was kept at home.

There were 19 "Return" cases. The source of infection in these is difficult to locate. In a certain number it was found that the primary case, after leaving hospital had developed a discharge from the nose, or an abscess or a sore of some description, and this was probably the infecting source. In others the infection was probably due to some infected clothes or toys not sent for disinfection, being put away when the first child went to hospital and produced on his discharge. It is interesting to note that seven of these return cases belonged to two families, which would seem to indicate that the infection lingers in certain constitutions,

During the year every effort has been made to limit the spread of this disease. As large a proportion as possible of the cases occurring in houses of four rooms or less, were removed to hospital, this being almost always accomplished within three or four hours of receipt of the notification. In two cases a magistrate's order for compulsory removal had to be obtained, but as a rule we were able to procure the consent of the parents by persuasion. Thorough disinfection of the room and clothing was carried out. In all cases every effort was made to discover any possible source of infection. For this purpose I personally visited every house infected. The new arrangement of notification of suspected cases, suggested by me and authorised by the Committee, has worked very satisfactorily. 23 post cards were received, and on investigation of the cases 9 were found to be scarlet fever, and notified accordingly. A number of other suspected cases were notified by telephone and similarly investigated.

The visitation of school cases of suspected infectious disease also led to the recognition of a few cases of scarlet fever, which might otherwise have escaped detection. As a result of my investigations, I am convinced that in a more and more rigid scrutiny of suspected cases and the proper isolation of these, as well as the marked cases, lies our best hope of limiting the prevalence of the disease.

Of the value, and, in such a town as this, of the necessity of hospital isolation, I am convinced; but the hospital must be large enough. A small hospital, only able to isolate 30% of the cases, is simply playing with the question. Some persons are inclined to say that such a disease as scarlet fever is not worth all this trouble and expense. "It is a very mild affair and very few die of it," but it must be borne in mind that this mild type may be only a phase. Twenty years ago the type was very virulent, whilst in the days of Sydenham again, it was so mild as to be little regarded. It is also important to remember that although not causing a high death-rate it is attended frequently with very grave sequelæ, such as weakness

of the kidneys, and ear disease, and is thus an important factor in weakening the constitutions of the youth of the town, and laying up for them trouble to come.

Measles.—An epidemic of this disease prevailed during the latter half of the year. We were informed by the schools of 2,100 cases, and 95 deaths were registered, giving a death-rate of $\cdot 92$, being the highest rate since 1896.

The epidemic commenced in the Beacon and Shields Wards, and thence spread south to Deans and Westoe, finally finishing up in the Bents.

On receipt of information from the schools the infected houses were at once visited by the Sanitary Inspectors, who left a printed form of instructions. In all cases where no medical man was in attendance I personally visited the house and examined the child to verify the information. Cases of scarlet fever, skin disease, etc., were thus detected.

The comparatively late date at which we get our information, the impossibility of isolation and the age of those affected account for the large number of cases and deaths.

In addition to the measures mentioned above, nine infants' schools and departments were closed for four weeks. It is in these schools that the disease appears to spread most easily, and by this closure I do not doubt that we prevented an even more extensive epidemic. The increasing prevalence of this disease is noteworthy. The table of death-rates for zymotic diseases shows that whilst scarlet fever has steadily declined from a death-rate of $1\cdot44$ in the decade 1871-80 to a death-rate of $\cdot 21$ for the decade 1891-1900 measles has actually increased from $\cdot 42$ to $\cdot 44$ in the corresponding decades.

Typhoid Fever.—66 cases of typhoid fever were notified during the year, and there were only 3 deaths, the death-rate of $\cdot 06$ being the lowest on record. Of the total, 13 had evidently been infected

outside the Borough ; and 10 were secondary to others in the same house. This leaves 43 primary cases originating in the Borough. Their distribution in the different wards is shown in the table below. Tyne Dock, Laygate, and Deans Wards were those chiefly affected.

WARD.	Total.	Primary Cases.	Hospital.	Primary cases per 1,000 of Population.
Shields	8	6	3	·65
St. Hilda	3	2	2	·37
Holborn	8	3	6	·44
Beacon	3	1	1	·09
Bents.....	3	2	1	·18
Westoe	5	2	2	·15
Laygate	9	8	4	·81
Rekendyke	3	2	3	·17
Deans	15	8	9	·63
Tyne Dock	9	9	2	·71
TOTALS ..	66	43	33	·41

TYNE DOCK WARD suffered comparatively heavily, it may be remembered, in 1901, and the returns for the present year show a marked improvement on the last, there being only 9 primary cases as compared with 31. It is also to be noted that 4 of the 9 cases occurred in the Added Area, so that only 5 can be credited this year to the old Tyne Dock Ward. Two of these appeared attributable to the same source that produced so many cases last year, namely, the Engine Works, in Green Lane. Important sanitary improvements have now been carried out there. In three of the cases in the Added Area grossly insanitary conditions existed, including three large privy middens. Two of these have since been replaced by ash-closets.

DEANS WARD.—Of the 8 primary cases notified 1 proved not to be a case ; 4 occurred in the immediate neighbourhood of a home-treated case, infected outside the Borough, and there is a considerable probability that they were infected from that source. Deposit of noxious material on waste land appeared to be indicated as the

infecting source in two cases, one of these cases being situated immediately on the dividing line of the Deans and Rekendyke Wards. By dint of rather prolonged negotiations this deposit was put a stop to, and a marked improvement effected in the sanitary condition of the area.

LAYGATE WARD.—Most of the cases in this Ward occurred in more or less insanitary dwellings, the defects found being chiefly filthy condition, dampness and badly paved yards. These conditions have been attended to.

The small number of cases in the Borough as a whole is no doubt in part attributable to the climatic conditions that prevailed. The low mortality rate would appear to indicate a mild type of disease. The large proportion of cases, however, that were taken into hospital, viz., 50 per cent., is also no doubt an important factor in the reduction in the attack- and death-rate. A still larger proportion might, with great benefit, be admitted. Ample evidence of the facility with which the disease spreads from home-treated cases was obtained during the year.

Diphtheria, including Membranous Croup.—27 cases of this disease were notified, and 6 deaths occurred, giving a case-mortality-rate of 22·2 per cent. The disease was thus less prevalent and less fatal than last year, when the figures were 35 and 14 respectively. Three cases were secondary to others in the same house, and two had apparently derived their infection from outside the Borough.

There were thus only 18 primary cases originating in the Borough. The cases were scattered through the town and did not appear to be associated with each other, excepting one group of four, which was connected with a particular school. In the latter part of the year bacteriological examinations were made by me of material from the throats in these cases, and it would appear that many of the cases are septic rather than diphtheritic. Such throats, however, equally with diphtheria proper, are due to insanitary conditions, and such conditions were frequently found to exist in the infected houses, chiefly dampness, filthy condition, and unpaved or badly paved yards.

Infantile Diarrhœa.—This disease was only responsible for 17 deaths, a striking contrast with the 157 registered in 1901. Like the typhoid fever death-rate, this is the lowest on record, and is strong testimony to the influence of climatic conditions on the ætiology of this disease. The temperature of the ground, 4 feet below the surface, never rose to 57°F., the point which Ballard showed to be necessary for the propagation of the disease.

Whooping Cough caused 104 deaths, giving a death-rate of 1·01, being the highest recorded. It prevailed in epidemic form during the first six months, gradually disappearing in the latter part of the year. The Wards chiefly affected were Laygate, Rekendyke, Deans, Tyne Dock and Westoe.

The disease was doubtless chiefly spread by the schools. Of all the zymotic diseases it is the most difficult to control, owing to its long incubation period, its infectivity before the characteristic symptoms develop, and its prolonged course. The only preventive action that was taken was the exclusion from school of members of families in which the disease appeared. Information regarding the cases was obtained from the school authorities.

Chickenpox.—Owing to the danger of unrecognised smallpox, and the possibility of such cases being regarded as chickenpox, this disease was declared compulsorily notifiable on the 10th April for six months. This order was afterwards renewed at the expiration of that term, and is still in force. 421 cases were thus notified.

Tuberculosis.—This disease caused altogether 251 deaths in the Borough during the year, made up as follows :—

Pulmonary Tuberculosis	...	..	..	...	..184*
Tabes Mesenterica	...	...	...	...	5
Tuberculosis of the Nervous System (Meningitis, etc.)	..				31
Other Tubercular Diseases	...	...	...	...	31

* Excluding 2 persons not belonging to the town, but who died here.

During the year we have continued our work on the lines described in last year's report, that is the disinfection of clothing and rooms after deaths from Phthisis. Altogether 171 cases of Pulmonary Tuberculosis were investigated ; 28 rooms fumigated, and 37 parcels of clothing removed to the steam disinfectors.

So far no system of notification has been adopted, nor has any bye-law against indiscriminate spitting been passed. Certainly some form of notification should be adopted, the cost would be trifling, and the benefits to be derived are great. By notification we are able to exactly localise the disease ; to learn what classes and districts are specially affected ; to remedy insanitary conditions in the homes and workplaces of such persons ; and to educate them and their friends in the methods of cure and prevention of infection, supplying them with simple apparatus, such as spittoons and disinfectants. Again, a bye-law against indiscriminate spitting is urgently required. It is unquestioned that this habit is by far the most important mode of spread of the disease. It must be remembered that it is not only *known* consumptives that are dangerous, but many persons suffering from an incipient form. The County of Glamorgan has already such a bye-law, and most of the great cities of America also. The following is the bye-law recommended :—

“ A person shall not spit on the floor, side or wall of any public carriage, or of any public hall, public waiting room, or place of public entertainment, whether admission thereto is obtained upon payment or not.”

“ Any person offending against this Bye-Law shall be liable to a fine not exceeding £5.”

Of the 184 deaths from phthisis 103 were males and 81 females, and 153 were between the ages of 15 and 65. The following table shows the occupations of the affected persons for both this year and 1901. In 51 cases it was found that other members of the family had died from the disease.

PHTHISIS DEATHS DURING 1901 and 1902.

OCCUPATION.	MALE.		FEMALE.	
	1901.	1902.	1901.	1902.
Agent: Insurance	...	1	...	...
Baker	1	...	...	...
Barber	1	4	...	...
Barman	1	4	...	...
Billposter	1	...	...	...
Blacksmith	1	...	...	...
Block and Mast Maker	...	1	...	...
Bricklayer	2	3	...	...
Canvasser	...	...	...	1
Cartman	3	1	...	...
Carpenter	2	1	...	...
Clerk	1	8	...	...
Coal Miner	5	1	...	...
Coal Merchant	...	1	...	...
Coal Staithmaster	...	1	...	...
Coal Trimmer	1	1	...	...
Colliery Wagonwayman	...	1	...	...
Commercial Traveller	...	1	...	...
Dock Stevedore	1	1	...	...
Domestic Servant	...	...	...	2
Draper	...	1	...	...
Drayman	...	1	...	...
Engineman	...	2	...	...
Engineer	...	1	...	...
Engineer (Marine)	...	4	...	...
Glassmaker	1	2	...	...
Grocer	...	2	...	...
Grocer (Green)	1	...	...	...
Hawker	...	1	...	...
Horsekeeper	...	1	...	...
Housekeeper	...	...	...	47
Irondriller	...	1	...	...
Ironmonger	...	1	...	...
Joiner	4	1	...	...
Labourer (Dock)	2	3	...	...
Labourer (General)	14	9	...	...
Labourer (Ship)	3	...	...	...
Mineral Water Worker	...	2	...	...
Painter	3	...	...	...
Patternmaker	...	1	...	...
Physician	1	...	...	...
Plasterer	...	1	...	...
Plumber	...	2	...	...
Railway Guard	...	1	...	...
Rivetter	2	2	...	...
Seaman	9	4	...	...
Sea Fireman	6	3	...	...
Sea Steward and Cook	2	...	...	...
Sea Donkeyman	1	...	...	...
Scholar	8	4	6	8
Schoolmaster	...	1	...	...
Ship-plater	...	3	...	...
Shipwright	2	1	...	...
Shoemaker	...	2	...	...
Shop Assistant	...	...	...	2
Tailor	1	...	...	...
Tram Conductor	...	2	...	...
Wharfinger	...	1	...	...
None: Adults	5	4	59*	14
" Children	5	9	5	7
Totals	90	103	70	81

TOTALS..... } 1901.....160.
 1902.....184.

* Mostly Housewives.

DEATHS FROM TUBERCULAR DISEASES in South Shields during past 11 years.

Year.	Phthisis.	All Causes.	Phthisis, % of all Causes.	Tubes. Mes.	Tuber. Men.	Other Tuber.	Total Tuber. Diseases other than Phthisis.	Tub. Dis. (other than Phthisis), % of Deaths from all Causes.	All Tuber. Diseases.	All Tub. Dis., % of Deaths from all Causes.
1892	122	1591	7.66	29	43	51	123	7.74	245	15.4
1893	164	1858	8.82	35	23	48	106	5.68	270	14.5
1894	119	1470	8.09	7	24	39	70	4.71	189	12.8
1895	143	1845	7.75	25	20	49	94	5.05	237	12.8
1896	142	1628	8.72	19	34	45	98	5.98	240	14.7
1897	126	1558	8.09	14	28	42	84	5.31	210	13.4
1898	145	1988	7.29	18	16	48	82	4.11	227	11.4
1899	142	1937	7.33	23	20	23	66	3.40	208	10.7
1900	176	2077	8.42	19	30	28	77	3.77	253	12.1
1901	160	2028	7.89	31	16	24	71	3.50	231	11.3
Averages 1892-1901.	143.9	1798	8.00	22	25	39	87	4.83	231	12.9
1902	184	2011	9.15	5	31	31	67	3.33	251	12.5

Average Death-rates from *Phthisis* per 1000 of the Population—

1871-80	...	...	...	1.91
1881-90	...	...	...	1.84
1891-00	...	...	...	1.60
				1.78 mean.

THE BOROUGH HOSPITALS FOR INFECTIOUS DISEASES.

Denes Hospital.—444 patients were admitted to this Hospital during the year. During the whole of the year the scarlet fever wards have never contained an empty bed; not infrequently the number of patients has exceeded the number of beds, and we have never been far below the number of 60, which I regard as the outside limit that we are warranted in going to with our present accommodation. For such a number we have only 51 beds and cots, and 68,000 cubic feet of air space. As last autumn the number of cases occurring in the Borough was considerably below the average, the utter inadequacy of our accommodation is very apparent.

As regards typhoid fever, owing to its low prevalence, our accommodation proved sufficient.

The marked reduction in the proportion of deaths to cases treated is noteworthy. As regards scarlet fever it is probably not unconnected with the lessening of overcrowding of the wards. As regards typhoid fever the disease seems to have been of a milder type than in the previous year.

The case mortality inside the Hospital was scarlet fever 4.39%, and typhoid fever 2.32%; whilst outside the Hospital the respective rates were 4.6% and 18.1%.

Sundry improvements were carried out during the year. The out-of-date sanitary fittings in the old pavilions were replaced by new ones; new baths were supplied; the whole of the hot water supply of these pavilions was renewed.

The Hospital, however, remains quite inadequate owing to the want of accommodation for patients and staff, the absence of isolating accommodation, discharging block, etc., and its situation in a crowded neighbourhood. The question is now under consideration of the Health Committee, and they will doubtless shortly formulate a scheme for the erection of a new and up-to-date building.

The following table shows the number of patients admitted and discharged, &c., from Denes Hospital, during 1902 :—

Disease.	Remaining in on Dec. 31st, 1901.	Admitted during 1902.	Total Number Treated.	Discharged.	Died.	Remaining in on Dec. 31st, 1902.	Mortality per cent. of total number Dis- charged and Died.	Daily Average of Patients in Hospital.
Scarlet Fever ...	62	409	471	414	19	38	4.39	53.8
Enteric Fever...	8	35	43	42	1	...	2.32	4.0
Measles ...	1	...	1	1	...	...	..	...
Totals ...	71	444	515	457	20	38	4.19	57.8

Deaths.—1 patient was in Hospital only six hours ; 2 two days ; 1 three days ; and 2 five days.

The following cases were received from other Authorities according to agreement, a certain daily payment being made for them by such Authorities.

	Typhoid Fever.	Scarlet Fever.	Totals.
Workhouse, Harton... ..	1	...	1
Parish Cases	2	13	15
South Shields Rural D.C. ...	1	...	1
Totals	4	13	17

Also 6 cases of Scarlet Fever from "Green's Home," for which no payment is made.

DENES HOSPITAL.—The Hospital was first opened for the reception of Patients in May, 1883, and the number of cases admitted year by year, since that date, is as follows:—

Disease.	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	Totals
Smallpox ...	12	22	5	3	3	2	..	...	...	8	6	...	...	...	...	...	...	...	...	...	61
Scarlet Fever ...	23	8	100	120	212	60	23	43	118	134	164	199	126	195	259	266	284	282	486	409	3511
Enteric Fever...	7	16	9	11	9	6	15	35	17	8	42	26	66	65	47	107	114	44	66	35	745
Diphtheria ...	...	...	2	...	1	1	2	3	1	1	...	..	...	...	..	...	1	1	...	...	13
Typhus Fever...	3	16	3	...	...	2	...	1	...	2	...	...	...	...	...	...	..	...	...	...	27
Other Diseases...	6	4	7	3	19	2	4	7	3	3	2	2	2	1	1	2	...	1	4	...	73
Totals ...	51	66	126	137	244	73	44	89	139	156	214	227	194	261	307	375	399	328	556	444	4430

Cost per head per day for maintenance of patients in Denes Hospital, from April 1st, 1898, to 30th September, 1902—in pence.

	Year ended 31st March, 1899.	Year ended 31st March, 1900.	Year ended 31st March, 1901.	Year ended 31st March, 1902.	Half-Year ended 30th September, 1902.
Wages—Staff and Workmen	8·95	9·62	9·29	6·25	8·46
Provisions	7·59	8·18	6·96	6·43	7·74
Drugs, Medicines, and Surgical Instruments	·86	1·19	·98	·92	1·23
Draperies, Fittings, and Furnish- ings	·54	2·52	·80	2·92	·40
Plumbing, Repairs, &c.	·47	1·46	3·47	·45	1·39
Rates, Taxes, and Insurance	1·27	1·39	1·31	·74	·84
Printing, Stationery, and Adver- tising	·13	·12	·16	·21	·10
Coal and Coke	1·16	1·52	2·03	1·30	1·98
Gas and Water	1·02	1·32	1·49	1·23	1·47
Soap and Disinfectants .....	...	·07	..	·13	·19
Oil, Turps, &c.	·17	·33	·08	·02	·11
Horse Keep, Hire, &c.	·71	·90	1·09	·47	·35
Harness, &c.	·02	..	·21	·01	...
Cab Hire.....	...	...	...	·06	·02
Painting .....	...	1·95	...	...	...
Tithe Rent Redemption .....	...	·18	...	...	...
New Horse.....	...	·75	..	...	...
Undersetting Wall .....	...	...	...	...	1·22
Sundries	·23	·23	·06	·07	·28
TOTAL	23·18	31·79	28·08	21·27	25·86

Average for $4\frac{1}{2}$ years, 25·30 pence per head per day.

LENGTH OF STAY OF PATIENTS IN DENES HOSPITAL DURING THE PAST $5\frac{1}{2}$ YEARS.

YEAR.	Patients.	Days.	Average.
April 1st, 1897, to March 31st, 1898...	302	13,549	44·9
„ „ 1898, „ „ 1899...	490	13,668	27·9
„ „ 1899, „ „ 1900...	358	12,711	35·5
„ „ 1900, „ „ 1901...	357	13,439	37·6
„ „ 1901, „ „ 1902...	587	23,894	40·7
„ „ 1902, to Sept. 30th, 1902...	216	10,019	46·4
Totals	2,310	87,280	233·0
Averages	420	15,869	37·7

Whiteleas Small-pox Hospital.—The Hospital had only been cleared of scarlet fever convalescents about a fortnight, when the first case of small-pox was notified, and it remained open nearly continuously until the end of August.

Altogether 192 persons were admitted, 71 as patients to the Hospital, and 121 contacts for disinfection and observation. The portion of the old wood and iron building left on the ground is used for the reception of the contacts, and answers the purpose very well. The accommodation is of course limited, a dozen persons being about the maximum number. With our isolating pavilion and discharging block we are enabled to deal very effectively with cases, suspects, and contacts. For the last three months of the year the Hospital has been empty.

The following shows the number of cases treated in the Whiteleas Hospital since the opening in 1892 :—

Disease.	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
Smallpox 	28	51	14	22	12	3	9	3	2	0	71

Bacteriological Laboratory.—The fitting up of this useful department at the Health Office, Russell Street, was completed during the year. A considerable number of examinations have been made during the last few months, chiefly in connection with diphtheria and suspected diphtheria.

As a means of determining the infective nature of a sore throat, and the period for which it is necessary to isolate or exclude from school a child who has been attacked with diphtheria, the bacteriological method is invaluable. For doubtful cases of typhoid fever, and in connection with the fever hospital it will also be of great service.

STATISTICAL TABLES.

TABLE I.—CAUSES OF DEATH, 1902, IN SOUTH SHIELDS, arranged according to the Classification of the Registrar General, and including the deaths of residents in Harton Workhouse, Sedgfield Asylum, &c., and persons who died in the town, but did not belong thereto. (Vide p. 8.)

CAUSES OF DEATH.	AGES.											Totals.	55 to 60
	0 to 1	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards.		
I.—Specific, Febrile, or Zymotic Diseases	86	170	20	4	8	7	2	2	7	4	...	310	..
II.—Parasitic Diseases	1	..	...	...	..	...	...	...	...	...	...	1	...
III.—Dietetic Diseases	5	2	...	...	1	1	4	2	...	...	...	15	1
IV.—Constitutional Diseases	19	41	32	54	47	52	43	32	14	7	...	341	17
V.—Developmental Diseases	108	...	...	...	...	...	...	3	28	48	14	201	...
VI.—Local Diseases	239	131	40	31	51	70	110	129	118	48	4	971	58
VII.—Deaths from Violence	9	7	5	12	6	8	8	15	3	2	...	76	7
VIII.—Deaths from Ill-defined and not Specified Causes	96	11	...	1	...	1	2	...	1	...	...	*112	...
Totals	563	362	97	102	113	139	169	183	171	109	18	2027	83
I.—Specific or Febrile Causes.													
1.—Miasmatic Diseases.													
Plague ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox { Vaccinated ... ..	...	...	...	...	...	1	...	...	...	...	...	1	...
Unvaccinated	1	...	...	...	1	...	...	...	...	...	...	2	...
Unknown ... ..	...	...	...	...	...	1	...	...	...	...	...	1	...
Measles	20	73	1	...	...	1	...	...	...	...	...	95	...
Scarlet Fever (Scarlatina) ... ..	...	25	14	...	...	...	...	...	...	...	...	39	...
Diphtheria ... ..	...	3	1	...	...	...	...	...	...	...	...	4	...
Whooping Cough	40	62	2	...	...	...	...	...	...	...	...	104	...
Typhus Fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric or Typhoid Fever ... ..	...	...	...	...	2	3	...	1	...	...	...	6	...
Simple Continued and Ill-defined Fevers ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Miasmatic Diseases ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Influenza ... ..	...	...	...	2	...	...	1	1	6	2	...	12	...
2.—Diarrhæal Diseases.													
Simple Cholera ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhæa, Dysentery	14	1	2	...	...	...	...	...	...	...	...	17	...
3.—Malarial Diseases.													
Remittent Fever ... ..	...	1	...	...	...	...	...	...	...	...	...	1	...
Ague ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
4.—Zoogenous Diseases.													
Cow-pox, Effects of Vaccination ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Hydrophobia ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Glanders ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Splenic Fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
5.—Venereal Diseases.													
Syphilis	9	4	...	...	...	...	...	...	...	...	...	13	...
Gonorrhœa, Stricture of Urethra ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
6.—Septic Diseases.													
Erysipelas	1	...	...	...	1	...	1	...	1	...	...	4	...
Pyæmia, Septicæmia	1	1	...	1	1	1	...	...	...	2	...	7	...
Puerperal Fever ... ..	...	...	...	1	3	...	...	...	...	...	...	4	...

* Includes one age unknown.

TABLE I.—CONTINUED.

CAUSES OF DEATH.	AGES.											Totals.	55 to 60
	0 to 1	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards.		
<i>3.—Diseases of Circulatory System</i>													
Endocarditis			2	...	2	...	1	...	1	...	...	6	...
Valvular Diseases of Heart			3	2	2	...	9	11	5	3	...	35	4
Pericarditis ... ..			...	...	...	...	...	...	...	...	...	...	...
Other Diseases of Heart		2	4	4	3	13	28	25	23	4	...	106	15
Aneurism ... ..		...	...	...	...	1	...	1	...	...	...	2	...
Embolism, Thrombosis ... ..		...	1	...	...	2	...	1	4	3	...	11	...
Other Diseases of Blood Vessels ... ..		...	...	...	...	...	1	...	2	2	...	5	...
<i>4.—Diseases of Respiratory System</i>													
Croup*	2	2	1	...	...	...	...	...	...	...	...	5	...
Laryngitis	2	2	...	...	...	...	1	...	...	...	...	5	...
Bronchitis	44	21	2	...	3	1	11	16	27	11	2	138	8
Pneumonia	11	11	4	6	11	15	10	7	7	2	1	85	4
Broncho-Pneumonia	34	26	...	...	1	2	2	...	1	3	...	69	...
Pleuro-Pneumonia ... ..	...	2	1	...	...	...	...	...	...	...	...	3	...
Pleurisy ... ..	...	1	...	...	1	1	1	...	1	...	...	5	...
Emphysema ... ..	...	...	...	...	...	...	1	...	...	...	...	1	...
Asthma ... ..	...	...	1	...	1	2	1	1	...	...	...	6	1
Other Diseases of Respiratory System	2	1	...	...	1	1	1	3	...	...	...	9	3
<i>5.—Diseases of Digestive System.</i>													
Dentition	17	15	...	...	...	...	...	...	...	...	...	32	...
Sore Throat, Quinsy ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of Stomach	2	1	...	1	1	...	1	...	1	...	...	7	...
Enteritis	10	3	1	...	1	...	...	...	1	...	...	16	...
Peritonitis	1	...	2	1	3	1	1	1	...	...	...	10	1
Obstructive Diseases of Intestine ... ..	...	1	...	...	1	3	4	7	4	3	1	24	4
Ascites ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Cirrhosis of Liver... ..	...	...	1	...	...	3	5	5	1	...	...	15	1
Jaundice and other Diseases of Liver	2	...	...	...	...	...	1	2	...	2	...	7	2
Other Diseases of Digestive System ... ..	...	...	...	1	1	...	...	...	...	...	...	2	...
<i>6.—Diseases of Lymphatic System.</i>													
Lymphatics and of Spleen ... ..	...	1	1	...	...	...	...	...	...	...	...	2	...
<i>7.—Diseases of Glandlike Organs of Uncertain Use.</i>													
Myxoedema ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Bronchocele ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Addison's Disease... ..	...	...	...	1	...	...	...	...	...	...	...	1	...
Grave's Disease ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
<i>8.—Diseases of Urinary System.</i>													
Nephritis	2	2	...	...	...	...	5	3	1	...	...	13	1
Bright's Disease, Albumenuria	2	1	1	2	...	3	3	3	1	...	...	16	2
Disease of Bladder ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
„ Prostate ... ..	...	...	...	...	1	...	...	...	2	...	...	3	...
Other Diseases of the Urinary System	1	...	...	...	1	2	1	1	1	...	...	7	...
<i>9.—Diseases of Reproductive System.</i>													
Male Organs of Generation ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Female Organs ... ..	...	...	...	2	1	...	...	...	...	...	...	3	...
Abortion, Miscarriage ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Convulsions ... ..	...	...	...	...	1	...	...	...	...	...	...	1	...

* Includes Membranous Croup 3 and 7 years.

TABLE I.—CONTINUED.

CAUSES OF DEATH.	AGES.											Totals.	55 to 60
	0 to 1	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards.		
Placenta Prævia, Flooding ...	...	...	...	1	5	1	...	...	...	...	...	7	...
Other Accidents of Childbirth ...	...	...	...	4	3	4	...	...	...	...	...	11	...
10.— <i>Diseases of Bones and Joints.</i>													
Caries, Necrosis ...	...	1	...	...	1	...	...	...	...	...	...	2	...
Arthritis, Ostitis, Periostitis, Synovitis ...	...	...	1	...	...	...	...	...	...	2	...	3	...
Other Diseases of Bones and Joints ...	2	...	...	...	...	...	...	...	...	...	...	2	...
11.— <i>Diseases of Integumentary System.</i>													
Eczema ...	2	...	...	...	...	...	...	...	...	...	...	2	...
Carbuncle ...	...	...	...	...	1	...	...	...	1	1	...	3	...
Phlegmon ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cellulitis ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases of Integumentary System ...	1	...	...	...	...	...	...	...	...	...	...	1	...
VII.—Violence.													
1.— <i>Accident or Negligence.</i>													
Fractures and Contusions ...	...	1	4	7	2	4	2	6	2	2	...	30	3
Gunshot Wound ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cut, Stab ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Burn and Scald ...	2	6	1	2	...	1	...	3	1	...	...	16	2
Poison ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Drowning (Age Unknown 1) ...	...	...	...	1	3	2	1	2	...	...	...	10	1
Suffocation ("Overlain," under 1) ...	7	...	...	1	...	...	...	1	...	...	...	9	...
Otherwise ...	...	...	...	...	...	...	...	1	...	...	...	1	1
2.— <i>Homicide.</i>													
Manslaughter ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Murder ...	...	...	...	...	...	...	...	...	...	...	...	...	...
3.— <i>Suicide.</i>													
Gunshot Wounds ...	...	...	...	1	...	1	...	...	...	...	...	2	...
Cut, Stab ...	...	...	...	...	...	...	1	...	...	...	...	1	...
Poison ...	...	...	...	...	1	...	1	1	...	...	...	3	...
Drowning ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hanging ...	...	...	...	...	...	...	3	1	...	...	...	4	...
Otherwise ...	...	...	...	...	...	...	...	...	...	...	...	...	...
VIII.—Deaths from Ill-defined Causes.													
Dropsy ...	1	...	...	...	...	...	...	...	...	...	...	1	...
Debility, Marasmus, Atrophy and Inanition ...	92	11	...	...	...	...	2	...	...	...	...	105	...
Mortification ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tumour ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Abscess ...	2	...	...	1	...	...	...	...	1	...	...	4	...
Hæmorrhage ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sudden Death ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Causes not specified or ill-defined ...	1	...	...	...	...	1	...	...	...	...	...	2	...
Totals ...	563	362	97	102	113	139	199	183	171	109	18	2027	83

TABLE II.—CAUSES OF, AND AGES AT, DEATH DURING YEAR 1902, IN OR BELONGING TO SOUTH SHIELDS; ALSO SHOWING DISTRIBUTION OF DEATHS IN THE DIFFERENT WARDS.

Cause of Death.	NOTE.—Cols. 2 to 8 are NET DEATHS, i.e.— Exclude Non-Residents who died in Public Institutions within the District. Include Residents who died in Institutions beyond the District.								Deaths in or belonging to the different Wards (at all ages).										Public Institutions in the District.		
	All Ages.		0 to 14.		15 to 24.		25 to 65 over.		Shields.	St. Hilda.	Holborn.	Beacon.	Bents.	Westoe.	Laygate.	Reken-dyke.	Deans.	Tyne Dock.	Residence unknown.	Public Institutions in the District.	
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)												(10)	(11)
(1)																					
Small-pox	4	1	...	...	...	3	...	15	4	9	4	3	10	20	1	2	1	...	3	...
Measles	95	20	73	1	...	1	...	2	...	3	...	4	8	9	2	7	2	...	19	...	
Scarlet Fever	39	25	14	...	...	...	...	3	7	9	5	5	14	16	14	16	15	...	1	...
Whooping Cough	104	40	62	2	...	...	...	2	1	...	1	1	...	...	1	...	...	...	...	...
Diphtheria and Membranous Croup	6	...	4	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...
{ Typhus .....	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...
{ Enteric	6	...	...	...	...	6	...	2	2	...	...	1	...	...	...	1	...	...	1	...
{ Other Continued	12	...	...	...	2	2	8	...	2	...	...	1	...	...	4	1	3	...	...	...
Epidemic Influenza .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhoea	17	14	1	2	...	...	...	6	2	4	...	...	3	3	2	2	3	...	...	...
Enteritis	16	10	3	1	...	1	1	1	...	...	...	...	2	...	...	...	...	...	...	...
Puerperal Fever	4	1	...	...	...	3	1	1	...	...	...	...	1	...	...	1	1	...	...	...
Erysipelas	4	1	...	...	...	2	2	...	...	1	...	...	...	...	...	2	2	...	...	...
Other Septic Diseases	7	1	1	...	...	107	2	24	9	16	18	16	14	21	17	20	28	1	2	2
Phthisis	184	3	11	15	46	7	...	7	6	6	5	6	5	9	7	8	6	2	5	...	
Other Tubercular Diseases	67	14	26	17	3	7	...	8	7	6	6	7	9	5	8	6	4	...	...	...
Cancer, malignant disease	66	...	...	...	...	47	19	21	15	10	9	10	10	22	17	12	12	...	...	...
Bronchitis	138	44	21	2	...	31	40	21	15	10	9	10	11	22	17	12	12	...	...	...
Pneumonia	83	11	11	4	5	42	10	11	6	11	5	5	11	7	5	9	13	...	4	2	
Pleurisy	5	...	1	...	...	3	1	1	...	...	...	...	...	1	...	2	...	...	...	...
Other Respiratory Diseases	96	40	32	6	5	12	1	12	5	5	7	8	8	12	12	13	14	...	...	...
Alcoholism, Cirrhosis of Liver	22	...	...	1	...	20	1	2	2	2	1	7	1	3	2	1	1	...	...	1
Veneral Diseases	12	8	4	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...
Premature Birth	93	...	...	...	...	...	...	8	7	4	11	14	8	8	8	12	13	...	...	...
Diseases and Acc. of Parturition	19	...	...	...	5	14	...	2	2	4	1	1	3	2	2	3	2	...	...	...
Heart Diseases	152	...	2	9	6	99	36	16	13	18	16	15	18	14	12	14	16	...	...	6
Accidents	59*	9	7	4	6	24	5	14	6	8	...	2	3	7	6	6	6	1	30	2	
Suicides	9	...	...	1	...	8	...	...	...	...	...	...	1	2	...	3	1	...	4	3
All other Causes	692	252	78	15	13	164	170	69	36	54	62	63	67	83	84	77	95	2	20	...	
Totals, Net Deaths	2011*	561	362	95	97	598	297	229	132	168	158	172	196	252	218	233	247	6	90	16	
Populations	103330	3151	10980	24074	20308	41873	2944	9152	5351	6783	10349	11070	13370	9842	11728	13110	12565	...	...	...
Death Rates per 1000	19.4	17.7	33	3.9	4.7	14.3	101	24.9	24.6	24.8	15.2	15.5	14.6	25.6	18.6	17.8	19.6	...	...	...

* 1 Age unknown.

TABLE III.—DEATHS DURING THE YEAR 1902 IN THE URBAN SANTARY DISTRICT OF SOUTH SHIELDS—INCLUDING THOSE OF THE BOROUGH DYING IN HARTON WORKHOUSE AND SEDGEFIELD ASYLUM, AND PERSONS WHO DIED IN THE TOWN BUT DID NOT BELONG THERETO—CLASSIFIED ACCORDING TO AGES, DISEASES, AND THE MONTHS IN WHICH THEY OCCURRED.

AGES AT DEATH.						MONTH.	FATAL DISEASES.																			
Deaths at all Ages.							Smallpox.	Measles.	Scarlet Fever.	Diphtheria.	Croup (not spasmodic).	Whooping Cough.	Continued Fevers.			Diarrhoea and Dysentery.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Ague.	Phthisis.	Bronchitis, Pneu- monia & Pleurisy.	Injuries.	Heart Disease.	Puerperal Fever.	All other Diseases.
Under 1 year.	1 & under 5 years.	5 & under 15 years.	15 & under 25 years.	25 & under 65 years.	65 and upwards.	January ...	...	9	4	1	...	2	1	...	...	...	...	...	...	...	22	22	9	11	1	94
50	29	7	13	47	29	February ...	...	2	6	...	...	11	...	...	...	...	...	...	...	...	19	32	5	15	...	93
43	29	12	8	59	33	March .....	...	...	6	...	...	16	...	...	...	...	...	...	...	...	12	22	4	18	...	96
45	37	11	11	42	29	April	2	1	4	1	...	12	1	...	...	...	1	1	...	...	15	22	5	20	...	74
39	31	7	7	51	25	May	1	...	6	...	...	22	...	...	...	...	1	1	...	...	16	22	10	12	...	88
43	38	11	11	44	33	June	1	1	5	1	...	18	1	...	...	...	1	...	...	...	19	17	9	12	...	83
48	28	12	6	47	22	July	1	...	1	...	8	...	1	...	...	...	...	...	...	...	10	13	9	12	...	84
44	18	10	7	43	18	August .....	...	2	1	...	6	...	...	...	...	...	...	...	...	...	16	11	5	18	...	91
36	20	9	5	58	25	September .....	...	1	2	...	4	...	...	...	...	...	...	1	...	...	13	12	5	13	...	96
45	17	5	8	50	17	October .....	...	24	...	...	2	...	...	...	...	...	...	1	...	...	13	19	5	17	...	86
61	39	5	6	55	26	November...	...	...	...	...	2	...	...	...	...	...	...	2	...	...	18	11	8	9	...	109
47	36	7	5	53	15	December ...	...	33	2	1	...	1	1	...	...	...	...	...	...	...	13	25	6	11	...	74
62	40	1	11	55	26	TOTALS...	4	95	39	4	2	104	6	...	17	6	4	7	...	...	186	228	76	165	4	1081

* Includes 1 age unknown.

TABLE IV.—VITAL STATISTICS OF WHOLE DISTRICT
DURING 1902 AND PREVIOUS YEARS.

Year.	Population estimated to Middle of each Year.	Births.		Total Deaths Registered in the District.				Deaths in Public Institu- tions in the District.	Deaths of Non-residents registered in the District.	Deaths of Residents registered in Public Institu- tions beyond the District. §	Nett Deaths at all Ages belonging to the District.	
		Number.	Rate.*	Under 1 Year of Age.		At all Ages.					Number.	Rate.*
				Number.	Rate per 1,000 Births registered.	Number.	Rate.*					
1	2	3	4	5	6	7	8	9	10	11	12	13
1892	80,530	2,980	37·0	428	143	1,478	18·3	25	25	113	1,566	19·4
1893	82,284	2,916	35·4	527	180	1,749	21·2	38	12	109	1,846	22·4
1894	84,077	3,018	35·9	418	138	1,369	16·2	39	11	101	1,459	17·3
1895	85,910	3,018	35·1	566	187	1,749	20·3	31	13	96	1,832	21·2
1896	87,784	3,140	35·7	521	165	1,526	17·3	33	4	102	1,624	18·5
1897	89,699	3,227	35·9	499	154	1,477	16·4	39	6	81	1,552	17·2
1898	91,656	3,395	37·0	618	182	1,842	20·0	60	11	146	1,977	21·5
1899	93,657	3,371	36·0	593	175	1,829	19·5	75	20	108	1,917	20·7
1900	95,703	3,482	36·3	560	160	1,917	20·0	83	23	160	2,054	21·4
1901	97,800	3,607	36·8	613	169	1,865	19·0	90	8	163	2,020	20·6
Averages for years 1892-1901		3,215	36·1	534	165	1,680	18·8	51	13	118	1,784	20·0
1902	103,330	3,759	36·4	563	149	1,865	18·0	90	16	162	2,011	19·4

* Rates in Columns 4, 8, and 13 calculated per 1,000 of estimated population.

§ Does not include Whiteleas Hospital.

NOTE.—The deaths included in Column 7 of this table are the whole of those registered during the year as having actually occurred within the district. The deaths included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term “Residents” is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

The “Public Institutions” taken into account for the purposes of this table are those into which persons are habitually received on account of sickness or infirmity, such as hospitals, workhouses and lunatic asylums.

TABLE V.—BIRTH-RATES AND DEATH-RATES, SOUTH SHIELDS, 1871-1902 (PER 1000 OF THE POPULATION), CORRECTED SINCE 1891 ON CENSUS.

YEAR.	Population.	Deaths under 1 year per 1000 Births.	Gross Death-rate.	Zymotic Death-rate.	Smallpox.	Measles.	Scarlet Fever.	* Diphtheria.	Whooping Cough.	" Fever."	Diarrhoea.	Erysipelas, Pyæmia, and Puerperal Fev.	Phthisis.	Tabes Mesenterica.	Other Tubercular & Scrofulous Diseases.	Cancer.	Dis. of Circulatory System.	Dis. of the Nervous System.	Dis. of the Respiratory System.	Dis. of the Urinary System.	Dis. of Organs of Generation.	Injuries.	Birth-rate.
Mean 1871-80.....	.....	164	25.5	6.0	.858	.42	1.44	12	.78	.79	1.59	.25	1.91	..	..	..	1.23	..	..	..	..	.94	43.1
Mean 1881-90.....	.....	140	20.5	2.3	.012	.34	.45	10	.44	.19	.78	.12	1.84	..	..	..	1.64	..	..	..	..	.59	36.8
1891	78,920	176	22.1	2.85	.000	.90	.11	.29	.60	.20	.73	.14	1.54	.20	.69	.39	1.59	2.96	4.32	.31	.16	1.01	37.4
1892	80,530	143	19.4	1.66	.000	.29	.12	.09	.33	.21	.55	.18	1.51	.36	1.16	.60	1.82	2.87	3.41	.43	.07	.67	37.0
1893	82,284	180	22.4	3.18	.036	.38	.38	.02	.36	.37	1.56	.09	1.99	.42	.86	.48	1.93	2.79	2.95	.39	.15	.81	35.4
1894	84,077	138	17.3	1.36	.000	.19	.39	.04	.17	.20	.42	.06	1.41	.08	.74	.71	1.72	2.23	3.14	.46	.10	.77	35.9
1895	85,910	187	21.2	3.36	.000	.29	.18	.08	.90	.34	1.42	.05	1.65	.29	.80	.62	1.60	3.02	5.04	.31	.16	.66	35.1
Mean 1891-95.....	.....	165	20.5	2.48	.007	.41	.23	10	.47	.26	.94	.10	1.62	.27	.85	.56	1.73	2.77	3.77	.38	.13	.78	36.1
1896	87,784	165	18.5	2.49	.000	.92	.18	.04	.42	.28	.58	.01	1.61	.21	.90	.61	2.01	2.59	3.14	.28	.11	.53	35.7
1897	89,699	154	17.2	1.83	.000	.28	.15	.06	.25	.16	.88	.07	1.40	.15	.77	.59	1.41	3.33	2.66	.27	.12	.62	35.9
1898	91,656	182	21.5	3.09	.000	.56	.25	.00	.77	.39	1.11	.11	1.58	.19	.69	.64	1.79	2.93	3.84	.31	.14	.80	37.0
1899	93,657	175	20.7	2.33	.000	.04	.21	.02	.12	.42	1.41	.08	1.57	.24	.44	.89	1.43	2.55	3.88	.67	.17	.90	36.0
1900	95,703	160	21.4	2.33	.000	.55	.21	.09	.67	.19	.55	.12	1.83	.19	.60	.73	1.96	2.34	3.67	.48	.11	1.07	36.3
Mean 1896-1900.....	.....	167	19.8	2.41	.000	.47	.20	.04	.44	.30	.90	.08	1.59	.20	.68	.71	1.72	2.75	3.46	.38	.13	.78	36.2
Mean 1891-1902.....	.....	166	20.1	2.44	.003	.44	.21	.07	.45	.28	.92	.09	1.60	.23	.76	.63	1.72	2.76	3.61	.38	.13	.78	36.1
Mean 1871-1900.....	.....	157	22.0	3.60	.291	.40	.70	10	.56	.42	1.10	.15	1.78	..	..	..	1.53	..	..	..	....	.74	39.3
1901	97,800	169	20.6	3.36	.000	.68	.60	.14	.10	.22	1.60	.09	1.63	.31	.40	.68	1.65	2.83	2.84	.61	.10	.69	36.8
1902	103,330	149	19.4	2.62	.039	.92	.38	.06	1.01	.06	.16	.14	1.80	.04	.60	.63	1.79	2.83	3.15	.37	.21	.73	36.4

* Includes Membranous Group.

TABLE VI.—DEATH-RATES IN THE WARDS, FROM VARIOUS DISEASES
DURING 1902.

WARD.	DEATH RATE.	TOTAL ZYMOTIC.	SCARLET FEVER.	MEASLES.	WHOOPING COUGH.	ALL TUBERCU- LAR DISEASES.
Laygate	1·62	3·04
Shields	·22	1·63	·32	3·38
Holborn	3·6	·44	1·32	1·32	3·24
Hilda	2·6	·00	·74	1·30	2·80
Tyne Dock	2·2	·16	·55	1·19	2·70
Rekendyke	2·4	·17	·76	1·19	2·04
Deans	3·2	·53	1·06	1·22	2·13
Bents	1·2	·36	·27	·45	1·98
Beacon	1·1	·19	·38	·48	2·22
Westoe	2·6	·59	·74	1·04	1·42

TABLE VII.—CASES OF INFECTIOUS DISEASE NOTIFIED AND REMOVED TO HOSPITAL IN SOUTH SHIELDS
DURING THE YEAR 1902, CLASSIFIED ACCORDING TO WARD AND AGE.

Notifiable Disease.	Cases Notified in whole Borough.						Total Cases Notified in each Ward.								No. of such Cases removed to Hospital from each Ward.												
	At all Ages.	At following Ages—Years.						Shields.	St. Hilda.	Holborn.	Beacon.	Bents.	Westoe.	Laygate.	Reken dyke.	Deans.	Tyne Dock.	Shields.	St. Hilda.	Holborn.	Beacon.	Bents.	Westoe.	Laygate.	Reken dyke.	Deans.	Tyne Dock.
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.																				
	71	1	6	12	18	34	..	16	2	6	4	5	6	10	8	10	4	16	2	6	4	5	6	10	8	10	4
Smallpox ..	23	..	10	9	2	2	..	7	1	1	..	2	7	..	..	..	..	9	..	..	..	..	..	..	..	..	..
Cholera ..	4	..	2	2	..	2	..	..	1	..	..	1	..	..	1	9	17	..	..	..	..	..	..	..	..	..	..
Diphtheria ..	98	2	1	8	14	59	14	13	6	3	12	14	9	7	8	9	79	28	24	22	30	51	64	39	46	62	42
Membranous Croup ..	834	11	301	428	60	34	..	39	26	33	71	117	145	67	106	151	79	28	24	22	30	51	64	39	46	62	42
Erysipelas ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever ..	66	..	7	15	18	24	2	8	3	8	3	3	5	9	3	15	9	3	2	6	1	1	2	4	3	9	2
Typhus Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Relapsing Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Continued Fever ..	7	..	..	..	2	5	..	..	..	..	1	..	..	4	..	..	2	..	..	..	..	..	..	..	..	..	..
Puerperal Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Plague ..	421	52	193	172	4	..	..	5	10	15	29	28	99	54	59	74	48	..	..	..	..	..	..	..	..	..	..
Chickenpox ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals.....	1524	66	520	646	118	158	16	88	49	66	121	170	271	155	185	260	159	47	28	34	35	57	72	53	57	81	48

ISOLATION HOSPITALS { Denes Fever Hospital, situate in Deans Ward.
Whiteleas Smallpox Hospital, situated a mile South of the Borough Boundary.

TABLE VIII.—RESULT OF METEOROLOGICAL OBSERVATIONS, 1902, TAKEN AT 9 A.M. DAILY,
AT THE NORTH MARINE PARK, SOUTH SHIELDS; ABOUT 20 FEET ABOVE SEA LEVEL.

MONTH.	Mean Humidity.	Mean Temperature.	Highest Temperature Registered.	Lowest Temperature Registered.	Total Rainfall (in inches).	Greatest fall in any twenty-four hours.	Number of Days on which rain fell (.01 ins. or more).	Anemometer— Mean Daily Mileage.	Barometer.	1 foot Earth Thermometer.	4 feet Earth Thermometer.	DIRECTION OF WIND— NUMBER OF DAYS.
January ..	87.0	40.7	53	24	1.44	.36	18	327	29.989	34.4	42.2	W, 17; SW, 10; S, 2; NW, 1; E, 1
February ...	90.0	34.6	48.5	18.5	1.69	.44	19	281	29.880	34.4	42.5	SW, 9; S, 7; E, 3; SE, 3; NE, 2; N, 2; W, 1; NW, 1
March	82.5	43.7	61	31	.82	.33	17	253	29.706	41.4	43.7	S, 10; SW, 8; W, 5; N, 4; NW, 3; NE 1
April	76.3	46.1	62	32	1.53	.62	14	295	29.926	45.9	46.4	S, 10; NE, 5; E, 5; N, 5; W, 3; NW, 2
May	75.0	47.9	74	33.5	2.92	1.04	24	403	29.917	49.5	49.0	N, 16; W, 4; NW, 3; E, 2; S, 2; SW, 2; NE, 1; SE, 1
June	83.0	52.7	68	40	2.33	.39	18	323	29.927	54.0	51.4	N, 7; NE, 6; E, 6; S, 4; SE, 3; W, 3; SW, 1
July	76.0	57.9	77.5	40.5	2.35	.83	19	312	29.948	58.3	54.6	W, 12; N, 6; NE, 3; E, 3; NW, 3; SW, 2; S, 1; SE, 1
August	79.7	56.7	73	40.5	1.97	.37	16	270	29.886	56.1	54.7	N, 9; S, 8; W, 5; SW, 5; NE, 2; E, 1; SE, 1
September ...	79.9	55.2	71.5	37.5	.63	.14	13	304	30.013	54.2	54.6	N, 10; W, 7; S, 6; SW, 3; NW, 2; NE, 1; SE, 1
October ...	84.1	50.0	63	35	2.10	1.03	23	322	29.922	48.2	52.2	SW, 11; W, 6; NE, 5; N, 4; E, 3; S, 2
November ...	86.3	45.4	58	31	1.39	.27	12	403	29.862	43.7	49.8	S, 16; SW, 6; SE, 4; E, 3; W, 1
December...	83.2	41.8	55.5	29	2.61	.89	16	455	29.919	39.9	46.8	E, 8; W, 8; S, 8; SW, 5; SE, 1; NW, 1
TOTALS					21.68		209					S, 76; W, 72; N, 63; SW, 62; E, 35; NE, 26; NW, 16; SE, 15 = 365 days.
AVERAGES	82.0	47.7						330	29.908	46.6	48.9	

The highest temperature registered during the year was 77.5, and the lowest 18.5. The Station at the Denes Hospital was blown down on December 25th, 1902, but had previously been unreliable.

GENERAL SANITARY WORK.

Housing of the Working Classes Act, 1890.—Part I.—In addition to the action taken regarding individual houses during the past year I made a representation to the Authority under Part I. of the above Act, regarding an insanitary area, viz., bounded by Palatine Street on the north, South Terrace on the south, Heugh Street on the east, and Mitre Street on the west.

No scheme was adopted regarding this area, as it was considered that the expense would be too great. Five individual tenements (seven rooms, included below) were, however, closed; certain obstructive buildings in Soulsby's Court removed; 2 yards were cemented; 5 new water-closets were provided, and on the whole a very considerable improvement was effected.

Part II.—During the year I reported 24 dwellings or tenements as being "unfit for human habitation," notices being served in all cases. Two were repaired and put into such condition by the owners as to warrant the suspension of further proceedings; three were closed *without* a magistrate's order; whilst 19 (with a total of 22 rooms) were closed *on* the magistrates' order. None of the houses were demolished.

The following is a detailed list of the houses that have been dealt with under Part II. of this Act :—

Situation.	No. of Rooms.	No. of Tenants.	No. of Persons.	M.O.H.'s Representation.	At Court.	Result.
Mill Yard, East Jarrow ...	...	3	...	Jan. 27	...	Closed without further proceedings.
11, 13, & 15, Heron St. [basement]	4	3	7	July 28	Nov. 15 & Dec. 18	} Closing Order made on December 18th.
104, Wapping Street ...	9	9	about 25	"	"	
95, Palatine Street	2	1	6	Oct. 13	Feb. 25/03	Do. building vacated and left standing.
101, Palatine Street ... [basement]	1	1	2	"	"	Closing Order, building vacated and converted into coal depot.
4 & 5, Soulsby's Court. [basement]	2	2	8	"	...	Closing Order, building vacated and left standing.
20, Mitre Street [basement]	1	...	...	"	Feb. 25/03	Put into better order, and will be opened again when front area is cemented.
7 & 9, Heron Street ... [basement]	4	...	..	"	"	Closed, vacated, and left standing.
12, Mitre Street [basement]	1	...	...	Nov. 24	"	Do. do.

FACTORY AND WORKSHOP ACT, 1901.—During the year a large amount of work has been done under this Act, but it is impossible with our present staff to thoroughly supervise all the workshops and work places of the Borough. The register of workshops has been completed, and each inspector has visited those in his district and made a written report on each. 398 such visits have been made. I have personally visited about half the total number.

As regards the results of inspection, no case of overcrowding was detected, and as a rule the cubic space was much in excess of the minimum required. It may be remarked, however, that this minimum, 250 cubic feet, is ridiculously small, and quite inadequate with the means of ventilation found in these places. In the tailoring and dressmaking establishments the number of workers approaches or attains the maximum permitted, and here it is that the question of satisfactory ventilation becomes a pressing one. I found that as an almost universal rule the atmosphere of these places was unsatisfactory, varying of course in degree; the tailors' shops particularly were over heated and very close.

Five notifications were received from the Inspector of Factories and Workshops respecting insanitary conditions.

Two notices were sent out by this Department for the provision of proper and sufficient W.C. accommodation.

The following is a tabulated list showing action taken and result effected under the Factory and Workshop Act, 1901:—

No. on Register.		Nature of Nuisance.	Action taken.	Result.
196	...	Liquid from P.R....	Notice to provide W.C.	Pedestal W.C. fixed
15	...	Do.	Do.	Do.
—	...	Insufficient W.C. accommodation	Do.	Before Committee, 17/3/03, final notice to be served
22	...	Privy accom. not satisfactory	Do.	W.C. to be put in next spring
58	...	Do.	Do.	Left with Health Committee, 17/3/03
50	...	Insufficient W.C. accommodation	Do.	Work in hand, but not completed
—	...	Bad odours from untrapped opening at foot of waste pipe	To bring waste into open air over trapped gulley	Do.
142	...	Defective ceiling	Repair same	Room heightened, made much lighter
98	...	Defective yard	To cement same	Notice to be served
13	...	Do.	Do.	Do.
—	...	Cleansing ordered.	To re-paper walls.	Walls re-papered
194	...	Do.	Do.	Do.
195	...	Do.	Do.	Do.
182	...	Do.	Do.	Walls coloured
47	...	Do.	To cleanse premises	Premises cleansed
—	...	Do.	Do.	Ceiling white washed
93	...	Do.	Do.	Ceiling white washed
188	...	Do.	Do.	and floors cleansed
27	...	Do.	Do.	} Shop re-papered, ceiling white washed
56	...	Do.	Do.	
95	...	Do.	Do.	

The following were reported from the Factory Inspector:—

Facy.	...	Urinal unsuitable and very offensive	Notice served	...	New trough, coated with solution provided.
176	...	Insufficient W.C. accommodation	Nothing done	..	Shop vacated
Facy.	...	Women's sanitary conveniences in bad repair	Notice served	...	Privy erected for women workers.
1	...	No separate sanitary convenience for women	Inspector saw owner	...	Owner promised to put in extra privy
Facy.	...	Do.	Notice served	...	Plans have now been passed for sufficient W.C. accommodation

LIST OF WORKSHOPS IN THE BOROUGH ON REGISTER:—

Tailoring	23	Upholstery and Cabinets ...	8
Millinery	35	Blocks	1
Dressmaking	24	Picture Framer	2
Mantles.....	3	Plumber.....	2
Aprons	1	Cartwright.....	4
Hosiery	3	Boats	4
Slippers.....	1	Organs	1
Saddlery	1	Forge	1
Shoemaker	11	Smiths	7
Sailmaker... ..	3	Cycles	1
Blinds	1	Wirework	1
Baker	8	Compass Maker	1
Sweets	1	Plasterer	1
Fish Curer	4	Jeweller	4
Preserves	1	Watchmaker	6
Salt Packing.....	3	Photographer	2
Pickles	2	Lithographer	1
Candles	1	Beerbottling	1
Sausages	1		
Joinery	14		
		Total.....	188

FOOD AND DRUGS ACTS.—As regards the result of analyses of samples, a distinct improvement is shown in the quality. The percentage of genuine milks this year is over 75, as against 53 last year. All the butters are genuine, as against 10% adulterated last year. (Vide Table H.)

DAIRIES AND MILKSHOPS.—I have personally inspected a large number of the worst of these. Many of them are very unsuitable for the storage of milk; the Food Inspector is, however, gradually reducing the number of these.

COWSHEDS.—The two of these not on the Register are not fit to be registered, and intimation to that effect has been given to the tenant in order that he may look out for a more suitable place.

SLAUGHTER-HOUSES.—The scheme for the erection of public slaughter-houses is still engaging the attention of the Committee. A very suitable site has been acquired, and it has been arranged to inspect some of the most up-to-date public slaughter-houses prior to getting out plans.

COMMON LODGING-HOUSES.—The following table shows how these stood at the end of 1902 :—

	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
Number Existing.....	33	32	*18	17	17	18	21	24	24	22	22
Accommodation	900	801	335	370	374	...	...	701	705	968	668

* Reduced by Visiting Sub-Committee.

SEAMEN'S BOARDING-HOUSES.—The following Table shows how these stood at the end of 1902 :—

	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
Number Existing	120	...	...	...	...	80	73	71	79
Accommodation	775	760	738	862

HOUSES LET IN LODGINGS.—The question of the registration and proper control of these houses was brought forward by me during the year, and in accordance with your instructions a complete report on the subject was drawn up by the Town Clerk and myself. Many of these places are in a very wretched condition. The lodgers are usually of the lowest character, and it is impossible to maintain a decent sanitary state except by making the keeper of the lodgings responsible. A point of some difficulty is the definition of the term "house let in lodgings," but this need not prevent us putting on the

register those which certainly come under the category. Your Committee decided to make a start with the registration of furnished lodgings, being those in which the rent does not exceed five shillings a week.

MILL DAM.—With reference to the alleged nuisance here, careful daily observations extending over many months, were made both by myself and Inspector Weir. The Custom House drains were tested, and found defective. The whole subject was fully reported on to the special Sub-Committee, and the following sanitary improvements were directed to be carried out, viz., re-construction of public conveniences on Quay; re-construction of Custom House drains; dredging and deepening of Gut. This work is still in hand at the end of the year.

HOUSE TO HOUSE INSPECTION.—It is almost impossible for the present small staff to find time for this very necessary work, but during the year the following districts were so inspected:—(1) Laygate Ward, portion lying between Victoria Road, Derby Street, Cuthbert Street, and Maxwell Street. (2) Heugh Street area, as given under Part I. Housing of Working Classes Act. (3) Thames Street.

As a result a large number of nuisances and insanitary conditions were detected and remedied.

OTHER SANITARY WORK.—A large amount of important sanitary work has been done during the year, as shown in the tables which follow.

REPORTS

OF THE

INSPECTORS OF NUISANCES,

AND THE

INSPECTOR OF MEAT, FOOD & DRUGS, &c.,

Being a Summary of their Monthly Reports to the Health

Committee during 1902.

TABLE A.—NOTICES, &c., ISSUED IN 1902, FOR THE
ABATEMENT OF NUISANCES.

Preliminary Notices for the following:—	J. J. Hindmarch.	W. Clark.	R. W. Weir.	G. R. Lewthwaite.	R. Ayre.	Totals.
To Abolish offensive privy middens and substitute privy receptacles	5	8	...	3	1	17
„ Abolish obsolete W.C.'s and substitute wash-down type ... ..	...	...	...	...	1	1
„ Abolish cesspool ... ..	...	...	...	...	2	2
„ „ underground wash-house... ..	...	...	...	...	1	1
„ Reconstruct P.H. urinal... ..	1	...	...	...	...	1
„ Repair defective drainage	2	11	8	3	3	27
„ „ „ privies and W.C.'s	1	8	6	7	8	30
„ „ „ yard surfaces	31	24	20	24	17	116
„ „ „ „ walls ... ..	...	...	...	3	2	5
„ „ „ dwelling roof	4	18	8	8	6	44
„ „ „ privy „ ... ..	...	...	1	3	...	4
„ „ „ spouting and down comers... ..	4	9	2	3	13	31
„ „ „ yard gullies ... ..	...	...	...	...	3	3
„ „ „ scullery waste pipes	2	...	...	...	...	2
„ Trap „ „ „ ... ..	...	4	1	...	2	7
„ Replace „ „ sink	1	...	...	...	...	1
„ Repair dilapidated out-buildings, &c.	5	2	7	9	6	29
„ Provide hatches to privies	36	40	6	31	12	125
„ „ seats „ ... ..	...	2	1	5	...	8
„ „ doors „	1	...	...	3	...	4
„ „ back-doors to dwellings	1	1	...	1	...	3
„ „ floor ventilation ... ..	...	...	1	...	4	5
„ „ water supply for W.C.	1	1	1	2	3	8
„ „ „ „ for domestic purposes... ..	12	13	9	3	3	40
„ „ stable manure receptacle ... ..	...	5	...	...	...	5
„ „ proper and sufficient W.C. accommodation	1	...	...	1	1	3
„ „ proper and sufficient W.C. accommodation for workshop ... ..	...	2	...	...	...	2
„ „ proper and sufficient privy receptacle ... ..	...	...	3	...	...	3
„ „ yard gully	2	4	...	...	...	6
„ „ „ grate ... ..	...	...	1	...	4	5
„ Cleanse filthy Dwellings... ..	2	23	2	5	3	35
„ „ „ privies and out-building	1	12	166	1	...	180
„ „ „ yards	26	4	...	5	9	44
„ „ „ Stairs and Staircases	1	...	...	...	9	10
„ Clear choked Drains	68	99	193	32	12	404
„ „ „ W.C.'s ... ..	...	...	72	12	3	87
„ „ „ Spouts ... ..	...	...	3	4	2	9
Carried forward ..	208	290	511	168	130	1307

TABLE A—Continued.

Preliminary Notices for the following :—	J. J. Hindmarch.	W. Clark.	R. W. Weir.	G. R. Lewthwaite.	R. Ayre.	Totals.
Brought forward	208	290	511	168	130	1307
To Prevent liquid flowing over street from privy... ..	14	18	28	27	4	91
„ Prevent overflow from cesspool	3	..	..	..	..	3
„ Cease keeping animals to be a nuisance	9	2	3	2	5	21
„ „ overcrowding in a dwelling ... ..	..	..	..	..	2	2
„ Remove accumulations of refuse	5	1	32	18	26	82
„ Fill up stagnant rain-water tank	1	..	1	£	..	5
„ „ „ cesspool ... ..	..	1	..	..	..	1
„ Abate Smoke Nuisance ... ..	..	..	1	..	..	1
„ „ „ „ by heightening Chimney ... ..	..	..	..	2	2	4
TOTALS	240	317	585	221	169	1532
Statutory Notices	3	24	16	15	..	58
Letters sent respecting Notices ... ..	..	..	94	58	16	..
Complaints sent to Surveyor's and Scavenging Departments	12	15	12	18	9	66
Notes issued from Health Office for Lime ... ..	..	..	..	..	..	326
Verbal Notices for minor Nuisances ..	..	286	95	..	10	..

TABLE B.—SUMMARY OF VISITS FOR 1902.

Nature of Visit.	J. J. Hindmarch.	W. Clark.	R. W. Weir.	G. R. Lewthwaite.	R. Ayre.	Totals.
Complaints of nuisances	30	182	216	142	121	691
Drains tested	2	4	2	..	2	10
To Seamen's Boarding Houses	2	379	364	50	5	800
„ Common Lodging Houses ... ..	..	4	81	57	10	152
„ Houses let in Lodgings ... ..	..	..	..	3	11	14
„ Workshops and Workplaces	15	189	93	52	49	398
Other visits of Inspection, &c., specified below	*	4685	5551	*	1469	..
Total visits of all descriptions	*	5443	6307	*	1667	..

* No record or record incomplete.

TABLE C.—EPIDEMIC WORK.

	J. J. Hindmarch.	W. Clark.	R. W. Weir.	G. R. Lewthwaite.	R. Ayre.	Totals.
Visits made on notification of Scarlet Fever, Enteric Fever, Small-pox, &c.	363	*209	402	116	163	...
Supervising home-treated cases ...	*...	*...	269	20	45	...
Phthisis Deaths	*4	*...	58	11	20	...
Small-pox Contacts	*104	*...	2269	46	337	...
Cases reported from Schools ...	189	440	604	355	289	1897
Totals ... ..	..	...	3602	548	854	...

TABLE D.—CASES REMOVED TO HOSPITAL.

Disease.	J. J. Hindmarch.	W. Clark.	R. W. Weir.	G. R. Lewthwaite.	R. Ayre.	Totals.
Scarlet Fever	87	97	119	44	65	412
Enteric Fever	2	10	15	2	1	30
Small-pox	5	3	29	2	17	56
Totals	94	110	163	48	83	498

TABLE E.—DISINFECTION.

	J. J. Hindmarch.	W. Clark.	R. W. Weir.	G. R. Lewthwaite.	R. Ayre.	Totals.
Rooms fumigated	147	184	261	112	90	794
Bundles of Bedding, &c., sent for Steam Disinfection... ..	147	187	239	109	89	771
Totals	294	371	500	221	179	1565

* No Record or Record Incomplete.

TABLE F.—STRUCTURAL WORK CARRIED OUT DURING
1902.

	J. J. Hindmarch.	W. Clark.	R. W. Weir.	G.R. Lewthwaite.	R. Ayre.	Totals.
Pedestal W.C.s fixed ... ..	...	19	6	14	...	39
" " in place of p.r.s. ...	...	...	2	..	...	2
Def. " " in workshops ...	...	4	..	...	...	4
Def. W.C. basin renewed ... ..	...	...	1	...	...	1
New urinals erected or improved ...	1	4	...	...	...	5
Privy receptacles provided in place of middens, &c.	6	11	3	9	1	30
Privy receptacles repaired	1	...	...	...	1	2
New drain provided	1	...	...	...	...	1
Def. drainage relaid	1	12	2	8	...	23
" " repaired... ..	1	...	7	...	...	8
" gullies replaced	1	29	9	9	3	51
" soilpipe " ... ..	...	...	2	...	...	2
Scullery waste-pipes trapped	1	10	3	1	1	16
Old drain abolished ... ..	...	...	...	1	...	1
Main waste-pipes renewed	1	...	2	2	...	3
Rain-water down-comers renewed ...	...	...	5	...	3	8
" Spouting " 	3	...	4	1	3	11
Dwelling roof repaired	2	...	8	...	4	14
Staircase " ... ..	...	...	1	...	...	1
Underground wash-house closed ...	...	...	..	...	1	1
Chimney raised... ..	...	...	...	2	1	3
Def. yards cemented	26	12	32	20	2	92
" Wash-house floors cemented ...	1	...	3	...	...	4
" Front area cemented ... ..	...	...	1	...	...	1
Foul rain-water tank abolished ...	1	...	...	1	...	2
Obstructive building removed ... ..	...	...	...	1	...	1

TABLE G.—SHOWING SUMMARY OF VISITS BY INSPECTOR OF MEAT, &c.,
DURING 1902, TO THE VARIOUS TRADES UNDER HIS
SUPERVISION.

Places Inspected.	Number Existing.	Number Opened.	Number Closed.	Number of Visits.	Remarks.
Slaughtering Places	125	1,395	The 10 closed are un-tenanted. Including 2 Vans in Market Place. 2 of these not registered yet.
Milkshops and Dairies	244	66	66	671	
Bakehouses	30	2	10	70	
Tripe-preparing Places	5	...	...	57
Fried-fish Shops	59	...	...	108
Cowsheds	11	1	...	42	
Fish-curing Places	6	...	...	23
Gut-scraping Places	2	...	...	17
Tallow-boiling Places	2	...	...	6
Ice-Cream Shops ... ..	?	...	...	20
Totals	484	69	76	2,409	

TABLE H.—SALE OF FOOD AND DRUGS ACTS.

The undermentioned samples have been examined by the Public Analyst for South Shields during 1902 :—

Description of Samples taken.	No. of Samples.	Analyst's Report.	Proceedings and Results.
Milk	58	Genuine 44 Doubtful Quality 3 7·4 per cent. added water .. 1 7·6 " " " " .. 1 12·5 " " " " .. 1 6 per cent. short of natural fat 1 6·3 per cent. " " " " .. 1 6·6 per cent. " " " " .. 1 7·3 per cent. " " " " .. 2 11·3 per cent. " " " " .. 1 13·6 per cent. " " " " .. 1 16 per cent. " " " " .. 1	None. Cautioned. 1/- and costs. 10/- and costs. £5 and costs. Cautioned. " " " " " " £2 and costs. Cautioned. 5/- and costs.
Butter	25	Genuine 25	None.
Whisky... ..	7	" " " " .. 7	" "
Rum	7	" " " " .. 5 26·2 per cent. under proof .. 1 32 per cent. " " .. 1	" " Cautioned. £1 and costs.
Pepper	8	Genuine 8	None.
Lard	7	" " " " .. 7	" "
Mustard	5	" " " " .. 5	" "
Sweets	7	" " " " .. 7	" "
Cheese	2	" " " " .. 2	" "
Rice, Ground	2	" " " " .. 2	" "
Sulphur, Precip.	1	" " " " .. 1	" "
Spirits Nitre	2	" " " " .. 1 42·8 per cent. deficient of ethyl nitre 1	" " £1 and costs.
Tinc. Rhubarb... ..	2	Genuine 2	None.
Syr. " " " " ..	1	" " " " .. 1	" "
Vinegar... ..	4	" " " " .. 4	" "
Ice Cream	2	" " " " .. 2	" "
Chocolates	2	" " " " .. 2	" "
Chewing Wax	1	21 per cent of paraffin wax... 1	" "
Methyl. Spirits.	7	Genuine 7	" "
Sal. Volatile			
Camphor Oil			
Eucalyptus Oil			
Calc. Magnesia..			
Gregory's Pow'r.	150		
Tinc. Iodine			

TABLE I.—PROCEEDINGS BEFORE THE JUSTICES UNDER THE FOOD AND DRUG ACTS.

DATE OF HEARING.	OFFENCE.	RESULT.
February 28th ...	For Selling Milk from which 16% of natural fat had been abstracted	5/- and costs.
April 9th.....	For Selling Milk adulterated with 7·6% of added water ...	10/- and costs.
April 9th.....	For Selling Spirits of Nitre 42·8% deficient of ethyl nitre ...	20/- and costs.
May 30th	For Selling Milk from which 11·3% of natural fat had been abstracted	40/- and costs.
September 22nd...	For Selling Rum which was 32% u.p.	20/- and costs.
November 12th ...	For Selling Milk adulterated with 7·4% of added water ...	1/- and costs.
November 12th ...	For Selling Milk adulterated with 12·5% of added water ...	£5 and costs.

TABLE J.—ARTICLES OF FOOD CONDEMNED AND
DESTROYED DURING THE YEAR.

DATE.	ARTICLE.
Jan. 15	Seven Turkeys.
„ 31	Set of beast lungs.
Feb. 21	Whole carcase and offal of a beast (Tuberculosis).
Mar. 19	Set of beast lungs.
„ 26	6 quarts of mussels.
April 4	Beast liver.
„ 16	Set of beast lungs.
„ 28	Keg of tripe.
„ „	Quantity of oysters.
May 5	Set of beast lungs.
„ 8	Set of beast lungs.
„ 13	Two baskets of herring.
„ 14	Beast liver and lungs.
„ 30	Carcase of a sheep.
July 1	Pair of beast udders.
„ 4	Beast liver.
„ 8	Set of beast lungs.
„ 11	Set of beast lungs.
„ 14	Six fore-quarters of lamb.
„ 14	Two boxes of pig kidneys.
„ 14	Four stones of fish.
„ 23	Set of beast lungs.
Aug. 8	Two beast livers.
Sept. 4	Two beast livers.
„ 6	1 stone of apples.
„ 9	Whole carcase and offal of a beast (Tuberculosis).
„ 12	Set of beast lungs.
„ 17	Beast head.
„ 20	1 stone of tripe.
„ 23	Six baskets of plums.
„ 26	Whole carcase and offal of a beast (Peritonitis).
„ 26	Pair of beast udders.
Oct. 7	Beast liver.
„ 8	7lbs. of tomatoes.
Nov. 17	Set of beast lungs.
Dec. 6	Beast liver.
„ 11	Beast liver and lungs.
„ 12	22lbs. of fish.

